Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Application of	
ECHOSTAR COMMUNICATIONS CORPORATION, **GENERAL MOTORS CORPORATION,** **HUGHES ELECTRONICS CORPORATION,**	
Transferors,	CS Docket No. 01-348
and	
ECHOSTAR COMMUNICATIONS CORPORATION,	
Transferee,	
For Authority to Transfer Control.	

To the Commission:

OPPOSITION TO PETITIONS TO DENY AND REPLY COMMENTS

EchoStar Communications Corporation ("EchoStar"), General Motors Corporation ("GM") and Hughes Electronics Corporation ("Hughes") (collectively, the "Applicants") hereby submit this Opposition to Petitions to Deny and Reply Comments ("Opposition") in response to the pleadings and comments filed in the above-captioned proceeding. For the reasons set for in their Application and this Opposition, the Applicants respectfully request that the Commission promptly approve the proposed merger.

I. THE MERGER WILL PROMOTE MORE CHOICES FOR CONSUMERS AND MORE EFFECTIVE COMPETITION AGAINST CABLE BY CREATING EXTRAORDINARY EFFICIENCIES

No party disputes that the merger will free up about half of the spectrum currently used by the two companies through the elimination of duplicative programming. Many commenters from consumer advocates to programming producers recognize the expansion of programming choices and increase in diversity that will result.[1] These parties recognize that expanded choices can in turn spur more effective competition with cable and help New EchoStar impose some true discipline on the ability of cable operators to continue to raise their prices.

Indeed, as explained in more detail in Section A below, as a direct result of the merger consumers across the United States will have access to local broadcast channels with digital-quality television picture and CD-quality sound *in every one of the 210 television markets in the United States*. The merger will also permit greatly expanded high-definition television ("HDTV") programming, pay-per-view and video-on-demand ("VOD") services, educational, specialty, and foreign language programming and interactive services.

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[1] *See e.g.*, Comments of Consumers Union, The Consumer Federation of America, and the Media Access Project ("Consumer Groups") at 13-14 ("The combination of EchoStar and DirecTV would add substantial satellite capacity and would avoid the redundancy of two competitors having to offer the same local signals in the same markets. As a result, these two competitors will be able to offer substantially more local programming as a combined entity than either of them would be able to do alone."); *see also* Comments of the National Taxpayers Union at 1; Comments of the League of United Latin American Citizens at 1; Comments of Frontiers of Freedom at 1; Comments of Vivendi at ii.

Unable to attack these benefits directly, some Petitioners set up "straw-men" by arguing that each company could achieve these benefits on its own, without need for the merger.[2] The Applicants show below that each of these specific arguments must fail. At a general level too, no Petitioner can deny three straightforward truths about this issue. *First*, thanks to the freed-up spectrum, the combined entity can provide roughly twice as many choices as each company standing alone. *Second*, while Petitioners make many unrealistic claims about each party's stand-alone capacity, neither company has had any reason to hold back and not make the fullest feasible use of the resources to which it has had access. *Third*, no matter what each party's stand-alone capacity is, it is the merger and only the merger which will achieve the end result of providing all local stations to all Americans and reclaiming scarce spectrum to increase available capacity.

A. New EchoStar Will Expand DBS-Offered Local Channel Service To Every Television Market in the United States

Subsequent to the announcement of the merger agreement on October 28, 2001, as part of the pre-merger transition process, EchoStar and DIRECTV analyzed the technical and economic feasibility of a "Local Channels, All Americans" plan by which every U.S. consumer can have access to satellite-delivered local television signals. Today, in a satellite application being filed contemporaneously with this Opposition, New EchoStar will make that plan a reality by applying for Commission authority to

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[2] *See e.g.*, NAB Petition at 75-92; NRTC Petition at 56-65; Pegasus Petition at 38-49.

launch and operate a new spot-beam satellite that, together with the two companies' operational and proposed satellites, will provide local channel service to all 210 Designated Market Areas ("DMAs"), equaling *all* Americans, and comply fully with mandatory carriage requirements.[3] DIRECTV and EchoStar engineers have designed a system that enables the receipt of local channels, other entertainment services and high-speed Internet access using one consumer-friendly mini-dish. That 18 x 22-inch satellite will be capable of receiving satellite signals from the merged company's multiple orbital positions. New EchoStar will deploy new set-top boxes and satellite dishes that will be made available, free of charge, to all existing EchoStar and DIRECTV subscribers who will require new equipment in order to receive their local channels.[4] Consumers across the country will pay the same price for this DBS service, *i.e.*, one nation, one rate card, regardless of a subscriber's location. And implementation of the plan will begin immediately upon regulatory approval of the merger, and the rollout can be completed as soon as 24 months thereafter.

The "Local Channels, All Americans" plan will feature the new satellite operating in conjunction with DIRECTV 4S, DIRECTV 7S, EchoStar 7 and EchoStar 8 satellites, for a total of 28 spot-beam frequencies, to collectively provide local programming of approximately 1,500 TV channels to the 210 DMAs, with necessary

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[3] The proposal will require use of a minimum of four uplink facilities, including DIRECTV's California uplink center and EchoStar's Wyoming facility.

[4] This aspect of the "Local Channels, All Americans" plan should obviate the concern of commenter Steven C. Shapiro that subscribers would be required to bear the cost of equipment replacements occasioned by the merger. *See* Comments of Steven C. Shapiro at 2-3.

back-up and service expansion capabilities. This "Local Channels, All Americans" service vision, however, is premised entirely upon the EchoStar-Hughes merger being successfully consummated. Contrary to the claims of some of the parties that have opposed the creation of New EchoStar, the tremendous public interest benefit of being able to serve every television market in the country is *not achievable by either company standing alone*.

Specifically, Pegasus, the NRTC and the NAB each acknowledge the tremendous public interest benefit of providing more local channels to consumers in additional markets, but they seek to attack the merger-specificity of this benefit, and question New EchoStar's commitment actually to provide more local markets with local channel service. Each of these parties has retained an engineering consultant to hypothesize ways in which either EchoStar or DIRECTV on its own might spend hundreds of millions of dollars to expand its system capacity, even to the point of building new "greenfield" super-systems, in order to offer local channel service in every local television market in the country.[5] The merger, these consultants argue, is simply not necessary to achieve this result.

These arguments are without merit for a variety of reasons: *first*, they are based on flawed technical assumptions and require unacceptable quality sacrifices; *second*, and most important, they disregard completely the commercial feasibility of the

[5] *See* NAB Petition, Exhibit C, Declaration of Richard G. Gould ("Gould Declaration"); NRTC Petition, Exhibit O, Declaration of Walter Morgan ("Morgan Declaration"); Pegasus Petition, Attachment B, Affidavit and Report of Roger J. Rusch ("Rusch Declaration").

various proposed satellite projects. To take on the expense and risk of constructing and launching such a satellite under the current structure of fragmented DBS spectrum simply to serve smaller markets does not make economic sense. Thus, the Petitioners' speculation about each company's stand-alone capability is incorrect from a technical and commercial feasibility perspective. Neither party individually has either sufficient spectrum or could make the business case to adopt this plan alone. No one anywhere in the world has deployed a commercial satellite with anything near the capability of such super-satellites. Indeed, if Mr. Rusch's theories had true practical applicability, there would be no reason why Pegasus could not implement its expert engineer's plan and provide the entire nation with local video service from a "super-satellite" located at one of its licensed Ka-band slots. The simple truth is that nothing short of the proposed merger can enable all Americans to receive all of their local stations by satellites. Neither company alone has sufficient capacity to dedicate a tremendous portion of its scarce spectrum to the expansion of local channel services, and neither company alone could afford to do it.

1. The Petitioners' Technical Arguments Are Based on Flawed Technical Assumptions and Would Require Quality Sacrifices

As explained in more detail in the attached Technical Annex authored by Dr. Richard Barnett of Telecomm Strategies, NRTC, Pegasus and NAB engineering consultants make a variety of incorrect, unwarranted or unproven assumptions about the technical feasibility of their proposals to improve the capacity of the DIRECTV and EchoStar satellite systems. These include:

- assuming compression ratios that either are not presently achievable or that would result in much poorer video quality;[6]
- proposing the use of MPEG-4 video coding in place of MPEG-2, which demonstrates a complete misconception about the role and applicability of MPEG-4 to broadcast-quality video transmissions;[7]
- proposing the use of a new modulation scheme for DBS that is significantly more susceptible to interference, and compounds antenna design issues;[8]
- proposing "super-satellites" that would push beyond the mass and power limits of commercial satellite technology, and that would require a super-sized antenna as well as significant advances in antenna design and deployment;[9] and
- proposing systems that pose significant risks of failures and poor service quality due in part to erroneous assumptions and misunderstandings concerning satellite spot-beam coverage.[10]

The flawed end result of these theoretical exercises is summed up by Dr. Barnett. The capacity calculations of the merger opponents rely on improvements in technology that "are either (a) not yet available and unlikely to become available in the

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[6] Gould Declaration (NAB) at 5-11, 14; Rusch Declaration (Pegasus) at 11.

[7] Gould Declaration (NAB) at 14; Rusch Declaration (Pegasus) at 11.

[8] Gould Declaration (NAB) at 12-14; Rusch Declaration (Pegasus) at 10-11.

[9] Morgan Declaration (NRTC) at 23.

[10] Morgan Declaration (NRTC) at 24-36; Rusch Declaration (Pegasus) at 4-9.

near future, or (b) impractical from a business perspective," while the new satellites proposed are "superficial concept designs only and have not been rigorously developed to establish their feasibility, cost, schedule or performance."[11] Thus, Dr. Barnett concludes that "[a]ll predictions of capacity achieved and spectrum used" by the new satellite designs of the petitioners are "seriously in error."[12]

2. None of the Postulated Super-Satellites Is Commercially Feasible

Even if the technical flaws in these analyses are ignored, the submissions by the engineering consultants of Pegasus, NRTC and NAB in essence merely restate the truism that, with enough time and enough money, almost anything is possible on paper. They *disregard entirely* the question of whether the measures and systems they advocate are *commercially* feasible and thus able to be deployed in the foreseeable future under real-world conditions.

As such, these submissions are of no utility to the Commission's analysis here. As recognized in the Department of Justice Merger Guidelines, proper competition analysis is limited to alternatives that are "practical in the business situation faced by the merging firms" and should not rely on alternatives that are "merely theoretical."[13] And

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[11] Declaration of Dr. Richard J. Barnett on Behalf of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Exhibit B, at 1 ("Barnett Declaration").

[12] *Id.*

[13] Horizontal Merger Guidelines, § 4.

this principle is embedded in Commission satellite precedent, as well. The Commission has specifically acknowledged that satellite system design is "necessarily innovative" and involves "a variety of business judgments."[14] Thus, the Commission historically has granted substantial deference to a satellite company's business judgment in this complex area. For example, the Commission has declined to conduct comparative hearings to evaluate the system designs of Applicants for mobile satellite spectrum because "[s]ystem design decisions involve a complex set of trade-offs among engineering, marketing and financial considerations."[15] The Commission stated it preferred "not to involve itself in business judgments of this nature."[16] Instead, the Commission found that a cost-benefit analysis of a "gold-plated" system as opposed to a "no-frills" system was "a determination better left to the marketplace."[17] Similarly, with respect to geographic service requirements, even where DBS service is technically feasible from a

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[14] *In the Matter of Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for, and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services*, 2 FCC Rcd. 485, 488 ¶ 25 (1987) ("*MSS Spectrum Allocation*").

[15] *Id.* at 487 ¶ 15.

[16] *Id.*

[17] *Id.* In deferring to the business judgments entwined in a mobile satellite company's system design, the Commission followed its precedent of avoiding comparative hearings on system design among Applicants for cellular licenses. *See In the Matter of Amendment of the Commission's Rules To Allow the Selection from Among Mutually Exclusive Competing Cellular Applications Using Random Selection or Lotteries Instead of Comparative Hearing*, 98 FCC 2d 175, 186 ¶ 19 (1984) ("*Cellular Lottery Decision*") (stating "[c]ellular design involves a complex set of trade-offs among engineering, marketing and financial decisions" that are "essentially business judgments a cellular company must make in response to the demands of its customers").

particular orbital location, the Commission does not require services from that location to be offered if such service "would require so many compromises in satellite design and operation as to make it economically unreasonable."[18]

In this case, the capacity expansion "solutions" proposed by Pegasus, NRTC and the NAB all ignore economics and business judgment because they focus on one type of programming service – local broadcast channels – to the virtual exclusion of national programming that DBS providers must continue to provide in order to be competitive. For instance, as Dr. Barnett observes, this preoccupation with local channel service in satellite design ignores, for example, the need to plan for the evolution of HDTV into "an essential national programming product with vast audience appeal." Dr. Barnett explains it is not possible today to

> accommodate one HDTV channel in each 24 MHz satellite transponder, although it is possible that this could increase to two HDTV channels per transponder with further technical innovations.[19]

Dr. Barnett further testifies, the increased requirement for transponder capacity capable of carrying national programming is not limited to HDTV. Other areas

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[18] *Revision of Rules and Policies for the Direct Broadcast Satellite Service*, 11 FCC Rcd. 9712, 9762 ¶ 128 (1995); *see MCI Telecommunications Corp., Assignor and EchoStar 110 Corp., Assignee; For Consent to Assignment of Authorization to Construct, Launch, and Operate a Direct Broadcast Satellite System Using 28 Frequency Channels at the 110° W.L. Orbital Location; American Sky Broadcasting, LLC, Assignor and EchoStar North America Corp., Assignee; For Consent to Assignment of Transmit-Receive Earth Station Authorizations*, 16 FCC Rcd. 21608, 21649 ¶ 42 (1999).

[19] Barnett Declaration at ¶¶ 4-6.

of growth in programming include new national networks and additional pay-per-view, VOD, interactive and educational channels. Therefore, EchoStar and DIRECTV must plan for growth in requirements for transponders with the ability to provide national programming. The more of the scarce orbit-spectrum resource is used up for local programming the less is available to cater for this growth in national requirements.[20] The simple but all-important point, of course, is that DBS providers must prioritize different types of programming, and must strike a balance in allocating their scarce capacity among different types of services. Thus, the fact that Pegasus expert Roger Rusch, for example, has designed on paper a theoretical spot-beam satellite operating from a single orbital location that would maximize the goal of carrying every local broadcast television station in the country[21] is an academic (but flawed) exercise wholly irrelevant to the question of whether either company could or could not do what he theorizes, or more broadly, whether the creation of New EchoStar is in the public interest. Mr. Rusch has ignored completely the different real-world business considerations involved in balancing capacity demands for local channels with the need to add new and additional national programming, such as HDTV, pay-per-view, VOD, interactive, educational and foreign-language channels. Simply put, without the greatly enhanced capacity, scale and combined subscriber base of New EchoStar, neither company alone would strike a balance that would utilize one-third of its full-CONUS DBS frequencies to provide local broadcast carriage in the manner Rusch suggests.

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[20] *Id.* at 6.

[21] Rusch Declaration (Pegasus) at 7-9.

3. Neither Company's Stand-Alone Capabilities Allow Local Service to All Americans

As noted above, the Petitioners' extrapolation of universal local channel service from each company's current and planned capabilities suffers from technical flaws and a blatant disregard for commercial feasibility. The decision by a DBS operator to serve a local market involves questions of both technical and economic feasibility. In assessing each DBS operator's standalone ability to offer local channel service to subscribers, rather than deal with fanciful proposals and speculative projections, the Commission must deal with the facts and economics.

a. Current Capabilities

The current capabilities of existing and planned EchoStar and DIRECTV satellites are as follows:

- EchoStar currently provides local channel service in 36 DMAs utilizing full-CONUS satellite beams from the 110° W.L. and 119° W.L. orbital positions, as well as satellites at its 61.5° W.L. and 148° W.L. orbital positions;

- EchoStar recently launched its EchoStar 7 spot-beam satellite into the 119° W.L. orbital position, and plans to launch EchoStar 8, a second spot-beam satellite, into the 110° W.L. orbital position later this year;

- With these spot-beam satellites in place, New EchoStar expects to be able to provide local broadcast signals in approximately 50 DMAs using ten of its fifty licensed full-CONUS DBS frequencies;

- DIRECTV currently serves 41 markets with its DIRECTV 4S satellite, which has 6 frequencies dedicated to spot-beam use, and is located at 101° W.L.;

- DIRECTV plans to allocate several more frequencies' worth of CONUS capacity on an interim basis (pending the launch of another spot-beam satellite) at the 119° W.L. orbital position in order to achieve coverage of ten more local channel markets this year, for a total of 51;

- DIRECTV also plans to launch another spot-beam satellite, DIRECTV 7S, into the 119° W.L. orbital location in 2003, which could have up to four frequencies allocated for spot-beam use.

In sum, EchoStar will have the capability of offering local channel service in approximately 50 DMAs from its spot-beam satellite, in light of its satellite architecture, economic feasibility considerations and estimated redundancy needs. In this regard, NRTC expert Walter Morgan is incorrect that EchoStar on its own can provide all local stations to 80 DMAs by using EchoStar 7 and 8.[22] Although the spot-beams on EchoStar 7 and 8 would have the physical capability of viewing additional DMAs (meaning all or a large portion of each DMA), that capability is meaningless: because of must carry obligations, even under EchoStar's current must carry implementation plan, EchoStar 7 and 8 will be only able to serve a fraction of these DMAs.

For its part, DIRECTV will have the capability of offering local channel service in 51 DMAs without dramatically reducing the carriage of other national programming using CONUS capacity. Assuming that DIRECTV 7S: (i) suffers no technical complications during construction and is not delayed; (ii) is launched successfully; and (iii) is not required to be used for backup capacity in the event that DIRECTV 4S malfunctions, then DIRECTV will have the *technical* capability with its combined fleet to serve 103 DMAs in late 2003 or early 2004. However, the merger opponents' attempt to emphasize this point[23] misses the mark. DIRECTV simply cannot

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[22] *See* Morgan Declaration (NRTC) at 22.

[23] *See* NRTC Petition at 58 (stating – erroneously – that DIRECTV can serve 110 DMAs using satellites already in orbit or currently on order).

serve 103 DMAs because, once again, the issue of technical capability is not meaningful unless it is considered in tandem with the economic realities of providing local channel service. As set forth in more detail below, at most, the DIRECTV 4S and DIRECTV 7S satellites will serve approximately 29 additional DMAs, or approximately 70 DMAs total, and it may likely serve less.

b. The Economics of Providing Local Channel Service

As Dr. Willig observes, in assessing the question of how many DMAs each DBS firm is capable of serving, the merger opponents "have only focused on technical feasibility, while ignoring the crucial issue of economic costs and benefits."[24] In particular, when the DBS firms are determining the DMAs in which local channels should be added, there are at least three major factors which influence that determination. *First*, an attempt is made to calculate the expected return from adding local channels in that DMA,[25] and as Dr. Willig notes, "a key factor in determining the expected return from adding local channels is the size of the DMA: According to both DBS firms, larger DMAs, all else being equal, are associated with larger expected revenue – primarily because the expected increase in total new subscribers are greater in larger DMAs."[26]

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[24] Declaration of Dr. Robert D. Willig on Behalf of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Exhibit A, at ¶ 9.

[25] *Id.* at ¶ 10.

[26] *Id.* Population growth by DMA is also factored into the analysis.

Second, another important factor in the process of selecting DMAs has been the penetration that the firm has in that DMA, since a significant share of existing subscribers will "take" local channels.[27] DIRECTV, for example, has been very concerned about losing its installed subscriber base in a DMA to the incumbent cable provider, so DIRECTV has been more likely to introduce local channels in DMAs in which it has a high penetration rate.[28]

Third, the costs of providing local service are also taken into account. In this regard, much of the cost associated with providing local channel service is "fixed" – that is, it does not vary with the number of subscribers.[29] As explained by Dr. Willig in more detail, the cost factors evaluated by the companies in determining markets in which to provide local channel service include backhaul costs, number of local channels that must be carried, and opportunity costs – the competitive impact of reduced national programming or other services.[30]

In summary then, EchoStar and DIRECTV each evaluate "the net present value of adding local channels, and only decide to expand local channel coverage that will bring them a sufficient return." As the size of DMAs decreases, it is less likely that

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[27] *Id.* As Dr. Willig notes further, DIRECTV has used a high DBS penetration rate as a "signal" of other factors that could make the introduction of local service more profitable. For example, a high DBS penetration rate may indicate that the local cable provider offers an inferior product. A high DBS penetration rate may also be a signal that the area is conducive to DBS service – that is, many households can "see" the southern sky where the DBS satellites orbit the earth. *Id.* at n.4.

[28] *Id.*

[29] *Id.* at ¶ 11.

[30] *See id.*

the return from adding local stations in these areas makes financial sense from either company's individual perspective – "the increased revenue potential decreases as the size of the DMA decreases, but the backhaul and opportunity costs stay relatively constant."[31]

Notwithstanding its posture here that each DBS firm could serve every television market in the country, the NRTC understands these economics. During the Commission's SHVIA implementation proceedings, the NRTC observed that "[e]ven assuming that DIRECTV and EchoStar were to expand their local service to cover 50% more of the DMAs than they have announced, which is highly unlikely, their local service offerings would still cease to exist at Market # 65" due to the facts that "[t]here is not enough satellite capacity available" to each provider, "nor is there a large enough subscriber base."[32]

The NRTC had it right. Applying these economics to DIRECTV's case, for example, once the company launches its DIRECTV 7S satellite in late 2003, it will have the technical capacity to serve 103 DMAs. The economic reality, however, due to the factors discussed above, is that DIRECTV would not likely serve more than about 70 DMAs[33] (fairly close to the NRTC estimate) due to the opportunity costs and expected returns, and likely would serve less.

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[31] *Id.* at ¶ 13.

[32] Comments of the National Rural Telecommunications Cooperative, CS Docket No. 00-96 (July 14, 2000) at 4-5.

[33] DIRECTV expects that DIRECTV 7S could provide local channels to approximately 29 additional DMAs by utilizing state-of-the-art spot-beam technology and three of the 32 frequencies at 119° W.L.

c. Serving 210 DMAs Makes No Economic Sense for Either EchoStar or DIRECTV As Individual Companies

The economics that Petitioners have ignored in overestimating the number of DMAs that EchoStar and DIRECTV could feasibly serve with their existing and planned satellites also apply with even more force to the fanciful notion that each company would be able to justify building and launching additional satellites simply to provide local channel service to every DMA in the country with their existing scarce channel capacity. As Dr. Willig observes, there are two primary reasons that neither DIRECTV nor EchoStar could serve all 210 DMAs on their own. First, each firm would have to utilize a significantly greater number of additional DBS frequencies to offer local channels to all 210 DMAs, which translates to about 10 programming channels' for each frequency that could otherwise be used to provide national programming or expanded advanced video services.[34] The benefits from these national channels (or advanced video services) to each company are extremely significant, since consumers have indicated that the leading reason for switching to DBS has been the provision of "more channels." Dramatically reducing each company's spectrum capacity to provide more local channel service thus "would likely have a significant adverse effect on the DBS firms' competitiveness and profitability."[35]

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[34] Willig Declaration at ¶ 14.

[35] *Id.* DIRECTV, for example, has 37 full-CONUS frequencies available for national programming and advanced services. Reducing that number by nine frequencies would represent a more than 24-percent reduction in capacity to provide national programming or advanced services. *Id.* at n.9.

The second factor is cost. Neither EchoStar nor DIRECTV can provide service to more than a limited number of DMAs with their current and expected fleets of spot-beam satellites, and cannot hope to serve every market in the country with them. And even if 103 markets could feasibly be served, to contemplate the provision of local service to the remaining 107 DMAs would require the launch of another spot-beam satellite. As Dr. Willig observes:

> Spot-beam satellites typically cost between $220 million and $300 million to construct, launch, and insure. The expected benefits of providing local service to these 107 DMAs would therefore have to be large enough to cover the opportunity costs of forgoing national programming (or advanced services) *and* the expected costs of providing the service including the cost of the new spot-beam satellite. Absent the merger, expanding local service to all 210 DMAs would not be profitable.[36]

These points highlight the error of the NRTC's suggestion that each DBS operator could provide local channel service in many more markets with the addition of "just one additional" spot-beam satellite beyond those on order.[37] These additional proposed satellites would cost each provider up to $300 million to construct, launch and insure, with only limited economic benefits because of their local channel focus, and a reduction in capacity that would be otherwise used for the expansion of HDTV, VOD and other national program offerings. In addition, each company would separately incur backhaul and other costs, and the potential available subscriber base in each market

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[36] Willig Declaration at ¶ 15.

[37] NRTC Petition at 58 (citing Morgan Declaration).

would be reduced. In short, NRTC proffers a completely unrealistic proposition from a technical and economic perspective that neither provider would ever pursue.

By contrast, New EchoStar will have access to a tremendous amount of new DBS capacity freed up by the elimination of duplicative programming content, which directly translates into a sensible and efficient satellite design and configuration that is actually capable of being implemented. Once again, as Dr. Willig states:

> Following the merger, however, the economics of providing local service to additional DMAs are altered. The combined current and potential subscriber base of the two DBS firms raises the returns on the investment in providing local service to smaller markets by spreading the fixed cost of providing local service over the larger expected revenue that would come from a larger subscriber base.[38] Furthermore, the opportunity costs of transferring a significant number of frequencies from use for national programming (or advanced services) to use for local services are sharply reduced.[39]

Moreover, as Dr. Willig observes, the combined current and potential subscriber base of the two DBS firms raises the returns on the investment in providing local service to smaller markets by spreading the fixed cost of providing local service over the larger expected revenue that would come from a larger subscriber base. As

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[38] Besides the revenue from potential new subscribers, the larger-than-expected revenues are generated by two factors: first, the ability to sell the local service to a larger existing subscriber base, and second, the ability to protect a larger subscriber base from switching to cable – as noted below in the text, carrying local channels is an important service to maintain extant subscribers.

[39] Willig Declaration at ¶ 16. (footnote omitted)

noted above, in the absence of the merger, the individual firms would not be able to serve these communities. Therefore, the merger is necessary to achieve this efficiency.[40]

NRTC has accused EchoStar and Hughes of failing to make "specific commitments" to serve many more local markets than the companies currently serve,[41] while the NAB challenges the extent to which the merger will result in a "net gain" in local channel service relative to the markets EchoStar and Hughes currently plan to serve.[42] Indeed, the NAB's stated principal concern is that competition between the nation's two DBS providers "has driven the expansion of local-into-local" and "will lead to more carriage of local stations."[43] Now that merger planning has resulted in the "Local Channels, All Americans" plan, with a firm commitment by New EchoStar – and only New EchoStar – to bring it to reality, all such concerns are simply not valid.

B. The Merger Will Increase National Programming Choices and Enhance the Quality of MVPD Service

As set forth in the Application, the merger of Hughes and EchoStar will yield other tremendous benefits to consumers of multichannel video services, such as expanded and new programming choices that include: more national programming networks; greatly expanded HDTV offerings; new and expanded VOD and pay-per-view

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[40] *Id.*

[41] NAB Petition at 58

[42] *Id.* at 79-80.

[43] *Id.* at iii.

services; additional educational, specialty and foreign language offerings[44]; and new interactive services. In the process of providing these benefits to the consumer, New EchoStar will continue to drive the evolution of DBS technology as the incumbent cable operators' most formidable competitor, and will continue to erode these companies' undisputed dominance of the MVPD marketplace.

Indeed, a prime example of this phenomenon is HDTV. Because HDTV is so bandwidth intensive, neither company standing alone will be able to deploy more than a few channels of HDTV programming. By contrast, New EchoStar (in addition to being able to provide local channel service in 210 markets, equaling all Americans) will have the capacity to provide at least twelve HDTV channels, and possibly more. As Thomson Multimedia, one of the world's largest manufacturers of consumer products, observes, New EchoStar's plan "to expand the number of available high-definition programming channels on a combined satellite platform" is a move that "will invigorate other operators in the cable and terrestrial TV business to offer more HDTV programming to consumers."[45] Similarly, Circuit City Stores, Inc., one of the nation's largest retailers of consumer electronics products, observes that "the broader offer of HDTV content by a satellite MVPD provider will most certainly spur competition in this

[44] The Application is supported by the League of United Latin American Citizens, the oldest and largest Hispanic civil rights group. "[The League] believes that the proposed merger . . . would provide improved communications services to the nation's Hispanic community . . . EchoStar & DTV have offered a great deal of programming for Spanish-dominant and bilingual households, but the potential exists for even more." Comments of the League of United Latin American Citizens at 1.

[45] Comments of Thomson Multimedia at 1.

area from cable operators and necessarily help speed the rollout of this technology nationally."[46-47] As Sharp Electronics Corporation puts it in its letter supporting the merger, "[s]uch an increase in HDTV capacity will provide incentives for programmers to increase HDTV programming, consumers to buy more HDTV equipment, and competitors in the cable and broadcast industries to upgrade their HDTV capabilities, all resulting in better service for consumers and a timely return of analog broadcast spectrum to the public."[48] In sum, as cable systems continue to "go digital" to compete with the competition that DBS operators have already brought to the MVPD marketplace, New EchoStar will continue to compete aggressively with the cable incumbents and drive them to improve their own products, pricing, and service quality.

The creation of New EchoStar also will not, as the NRTC asserts, result in a "loss of choice" for rural Americans."[49] Indeed, not only is the NRTC's view not

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[46] As Dr. Barnett observes, at present, it is only possible to accommodate 1 HDTV channel on each 24 MHz transponder. Barnett Declaration at ¶¶ 4-6.

[47] Comments of Circuit City Stores, Inc. at 5.

[48] Letter from Robert Scaglione, Vice President-Marketing, Consumers Electronics Group, Sharp Electronics Corporation, to Attorney General John Ashcroft, U.S. Department of Justice and Chairman Michael Powell, Federal Communications Commission (Feb. 4, 2002).

[49] NRTC Petition at 30. Nor is it true that the Applicants plan to consign all national programming to the 101° W.L. orbital location, as suggested by the State of Alaska. *See* Comments of the State of Alaska at 8-9 (expressing concern that an eastward shift of key national programming from 119° W.L. to 101°W.L. would eliminate or degrade service to parts of Alaska). The satellite Application filed today by Applicants makes clear that the merger will result in significantly more national programming from 119° W.L. than is currently available. Specifically, under the Applicants' plan, 9 of the 32 DBS frequencies at 119° W.L. will be devoted to spot-beams (one of which will be directed to Alaska). The remaining 23 frequencies will, therefore, be available for national programming. This will likely result in a significant increase in the national programming transmitted from the westernmost full-CONUS slot. Alaska too will

(Continued ...)

shared by other rural constituencies,[50] the proposition itself falls on its face. First, the elimination of extensive programming duplication by EchoStar and DIRECTV will result in a significant increase in the number and types of national programming, including HDTV programming, made available to DBS subscribers. Subscribers in rural areas will enjoy all the benefits of this expanded programming, benefits that simply could not be made available to them due to spectrum constraints in the absence of a merger. Second, to the extent that NRTC (and its members and affiliates, including Pegasus) currently has the right to distribute DIRECTV programming in competition with EchoStar in rural areas, that contractual right will be recognized by New EchoStar. Accordingly, in those rural territories served by NRTC, there will be no reduction in the number of providers of DBS service.

In addition, as a direct result of New EchoStar's plan to serve every market, equaling all Americans, with local channel service, rural Americans will receive access to local channel service, with digital quality pictures and CD quality sound, that *they have never enjoyed before, and could not receive but for the merger*. Indeed, a significant portion of these subscribers may not even be able to receive quality over-the-air television broadcast signals, such that New EchoStar will actually increase the number

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certainly share in the huge benefits of doing away with duplication of national programming services between the two companies.

[50] *See, e.g.*, Comments of the Louisiana Farm Bureau Federation at 1; Letter to Chairman Michael Powell from M.J. "Mike" Foster, Jr., Governor of Louisiana (Jan. 17, 2002) (merger will benefit rural residents of Louisiana); Comments of Jeff Hoffman, Champion Rural Economic Area Partnership Alliance Director at 1; Comments of Amy Pastor, Church Point (La.) Chamber of Commerce at 1.

of television households in rural areas. NRTC's claim that New EchoStar's "promised increase in local service ignores" rural consumers[51] is flatly incorrect.

Finally, the enhanced ability of New EchoStar to provide more programming choices necessarily means more carriage opportunities for independent programmers who historically have had trouble gaining carriage on cable systems. To maintain its competitive edge against cable operators, New EchoStar would have a clear incentive to differentiate itself through innovative independent programming sources.

C. The Merger Will Make Broadband Service Available to All U.S. Homes

As discussed in more detail in Section III below, the merger will provide New EchoStar with the spectrum capacity and economies of scale to *create* a true broadband "advanced service" alternative. In doing so, it will help cure the real problem, which the Petitioners assume away.[52] That problem is simply the unavailability of true broadband service to millions of rural Americans and the lack of effective broadband competition for all remaining consumers.

The high-speed Ku-band access services provided by the Applicants today do not cure this problem – they do not satisfy the Commission's definition of an "advanced service." Nor could either company standing alone deploy on a timely basis an advanced residential service of mass scale and appeal at an affordable price. Partly for

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[51] NRTC Petition at 60.

[52] *See e.g.*, NRTC Petition at 42-51; NAB Petition at 99-102; Pappas Telecasting Companies Petition at 6.

these reasons, SPACEWAY has been developed with a focus on the larger commercial, or "enterprise," customers, while EchoStar's Ka-band program has remained modest in scope. Both of these Ka-band programs will need to be refocused and integrated with one another to achieve the required economic scale for ubiquitous residential true broadband service. Therefore, the effects of this transaction on the broadband market are more akin to an increase in the number of true broadband competitors from "zero to one" in many areas and "one-to-two" or "two-to-three" in other areas.

Ultimately, the question for the Commission is simple: will it try to tackle the limited availability of advanced services throughout America with a web of costly cross-subsidy and regulation? Or, will it allow a multi-billion dollar private capital initiative to create a true broadband competitor that will provide advanced services to virtually all American homes? The latter alternative clearly is the better one for the public interest.

Given that there are large portions of the country that will not be able to receive cable modem or DSL service any time soon, the roll out of a competitively priced satellite broadband service will result in large consumer benefits. As with the video service, there are incentives to price this service subject to a national pricing policy such that the price for basic broadband service will be set on the basis of competition with cable modem and DSL services, thereby ensuring that rural customers will receive the benefits of this new service.

D. The Merger Will Allow New EchoStar to Achieve Extraordinary Efficiencies

In addition to the spectrum efficiencies discussed above, the merger will allow New EchoStar to substantially improve existing equipment and services to consumers at a lower cost.

First, New EchoStar will provide a unified DBS firm with a stable and better utilized satellite fleet. In addition to enabling innovative merger-specific efficiencies such as the "Local Channels, All Americans" plan, the merger will provide much greater flexibility to provide economical in-orbit backups. Over time, New EchoStar will also be able to rationalize its satellite fleet to the licensed frequencies of the combined company. For example, today, DIRECTV is using an entire DBS satellite at the 110° W.L. orbital location to utilize only 3 frequencies of licensed bandwidth at that orbital position. New EchoStar will be able to match its satellites much more efficiently to spectrum that is no longer fragmented between the companies.

The Applicants also anticipate that the standardized equipment and services of New EchoStar will be functionally superior to either company's existing equipment. Moreover, because of the economy of scale resulting from the combined customer base, the Applicants anticipate a tremendous savings in operational and manufacturing costs in providing these improved equipment and services. Finally, the increased customer base will also allow New EchoStar to decrease programming costs and may be the basis for creating a new programming platform. Together, these synergies will create a dynamic company that will be able to vigorously compete with

cable by offering consumers a more robust service at cost lower than either party could achieve alone.

The combination of EchoStar and Hughes will allow the companies to use the best equipment, technology, practices, and services of each to offer a better and less expensive product to consumers. The Petitioners intend to standardize the equipment used by its customers by combining the best elements of the technology of EchoStar and Hughes. The next generation of DBS and broadband equipment will offer a level of service currently unavailable. One aspect of this will be the "Local Channels, All Americans" plan described above, but Petitioners anticipate many other efficiencies as well. Functionalities available to EchoStar customers that are not currently available to Hughes customers or vice versa will be incorporated into the standardized equipment thereby improving services to all customers and potential subscribers.

Standardization of components will also create an economy of scale that will reduce costs. For example, New EchoStar will be using a standardized set top box. By increasing the volume of units ordered, New EchoStar anticipates substantial manufacturing cost savings that could be used to reduce charges to customers. The increased potential customer base would also make more economically attractive opportunities to integrate New EchoStar equipment with other services and devices. By increasing the size of the market, companies such as television or computer manufactures may be more interested in creating products that integrate DBS and broadband abilities directly into their products.

Consumers will also benefit from the consolidation of the service departments of EchoStar and Hughes such as customer service and billing operations.

New EchoStar would take advantage of the most efficient aspects of both companies to raise the level of service it would provide to customers. In addition, because of the economies of scale, it is anticipated that the cost of providing this improved service will decrease on a per customer basis. Similarly, the merger will allow the companies to eliminate duplicative operational practices. For example, the cost and time of programming backhaul and uplink would halved because New EchoStar would only need to perform these functions once where today each company must perform these operations separately.

New EchoStar will also gain tremendous efficiencies as a result of the combination of the EchoStar and Hughes customer bases. By having a greater number of viewers, New EchoStar will be in a stronger position to negotiate with programmers for more programming options at a lower per customer cost. Moreover, the increased number of customers may make the creation of an independent programming platform economically viable where it is currently impractical for either company alone.[53] With a large enough audience, New EchoStar will be in a position to produce and offer new and alternative programming choices to consumers. Finally, the greater number of viewers will make advertising on New EchoStar more valuable. Thus, by leveraging the size of its customer base, New EchoStar will be able to increase the programming options for its customers while decreasing costs.

[53] *See* Section IV.A, *infra.*

As a whole, the efficiencies of the merger will result in better, more competitive services that will offer consumers greater programming and broadband options in a more cost effective manner.

Nor is it possible, as the NAB suggests, for these efficiencies to be realized through some type of spectrum-sharing joint venture.[54] Such a venture is inherently unworkable outside of a merger scenario, primarily because it would require each company to cede control over a significant part of its "crown jewels" – its core satellite and spectrum resources. No court or agency has ever agreed that a transaction short of merger is a palatable alternative when it requires contribution of each firm's core assets. In fact, in this case there is unusually tangible proof that a joint venture would not work: the parties tried to negotiate one and failed because it was unworkable.

There are only three options for control in an arrangement like the one the NAB proposes – control by DIRECTV, control by EchoStar, or shared control with the potential for deadlock. Absent a merger, neither EchoStar nor DIRECTV would cede the essential satellite assets of their businesses to its competitor to control, or to a separate entity that itself would be subject to instability and deadlock. Because spectrum sharing would require numerous decisions that would significantly disadvantage one firm or the other, these control questions are ruinous.

Considering how the transition issues would be addressed in such a joint venture drives home the problem. Spectrum sharing would likely require the replacement of one firm's consumer equipment. The firm that had to replace its equipment would be

[54] NAB Petition at 90-92.

put at a significant disadvantage, even if the costs were shared, because consumers and retailers would stop buying that firm's equipment as soon as the decision was announced. Similarly, the decision on how to use each firm's satellite assets could significantly and adversely affect one firm or another in the event the agreement was terminated. Issues such as potential satellite failures and back-up plans would also be extremely difficult to address with separately owned diverse fleets of satellites. Finally, the general instability of such an arrangement would make the undertaking prohibitively risky, and would discourage investment in research and development needed to move the platform forward. Only the merger can provide the stability and decision making process to overcome these obstacles.[55]

E. The Commission Has a Unique Competence to Recognize the Extraordinary Spectrum Efficiencies Flowing from the Merger

The Commission is uniquely positioned to evaluate the extraordinary merger-specific efficiency of eliminating redundant spectrum use. In fact, the Communications Act requires the Commission to ensure the efficient use of the spectrum.[56] The Commission recently summed up the importance of spectrum efficiency and its role in achieving it:

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[55] In addition to the control issues, a joint venture would require unwieldy procedural entanglements. The firewalls necessary to avoid sharing of competitive information would massively complicate the relationship of the firms with a stand-alone joint venture entity, exacerbating the control and stability issues.

[56] *See* 47 U.S.C. § 303(g) (requiring the Commission to "[s]tudy new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest."); *see also* 47 U.S.C. § 309(j)(3)(D) (Continued ...)

> The growing demand for spectrum by new services and the continuing development of radio communications technologies make spectrum management a unique challenge. Spectrum is a valuable and finite public resource that must be allocated and assigned in a manner that will provide the greatest possible benefit to the American public. At the same time, it is important to encourage the development and deployment of new, more efficient technologies that will increase the amount of information that can be transmitted in a given amount of bandwidth.[57]

Within that policy, across a host of telecommunications sectors, the Commission has consistently treated duplicative use of the spectrum with skepticism.[58]

(in designing competitive bidding methodologies, the Commission shall seek to promote the "efficient and intensive use of the electromagnetic spectrum.").

[57] *In the Matter of Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millenium*, 14 FCC Rcd. 19868, 19870 ¶ 7 (1999); *see also In the Matter of Principles for Promoting Efficient Use of Spectrum by Encouraging the Development of Secondary Markets*, 22 Comm. Reg. 791 (2000).

[58] For example, in denying a request for the use of INTELSAT facilities to provide an identical telecommunications service already in existence on domestic satellite facilities, the Commission stated: "[g]iven the finite nature of the geostationary orbital locations for communications satellites... and transponder capacity on those satellites, the use of two transponders (one domestic and one INTELSAT) for identical service clearly is not an efficient use of this limited resource." *Transborder Satellite Video Services*, 8 FCC 2d 258, 281 n.30 (1981). *See also In re Revision of Radio Rules and Policies*, 7 FCC Rcd. 2755, 2783 ¶ 57 (1992) (In the radio broadcasting context, reasoning that it saw "no benefit to the public [by] permitting commonly owned same-service stations in the same market to substantially duplicate programming," the Commission limited simulcasting by such stations to 25 percent of the broadcast schedule.); *In re Application of State of Idaho for a Waiver of the Rules to Allow Federal Government Agencies to be Provided Service in the Private Operational Fixed Microwave Radio Service*, 3 FCC Rcd. 5910 (1988) (In ruling favorably upon a requested waiver of the Commission's rules by the State of Idaho to enable it to share several Private Operational-Fixed Microwave Radio Service facilities with the United States Forest Service and a federal energy body, the Commission reasoned that "the proposed sharing w[ould] conserve public funds and

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Notwithstanding the Commission's pro-efficiency policies, the NAB argues that the Application should be denied because the "Commission has never agreed to allow a single firm to control 100 percent of an entire spectrum [sic] . . . ."[59] This argument is both inapplicable here and incorrect.

First of all, the merger would not give New EchoStar such control. To arrive at its "100% control" idea, the NAB offers a gerrymandered definition of the relevant universe of spectrum – in its view, it is "all CONUS high-power Ku-band spectrum."[60] This definition excludes the DBS licenses held by R/L DBS and Dominion. Even under its own definition, moreover, the NAB ignores the licenses available for high-power Ku-band FSS satellites for the full-CONUS DBS slots allotted by the ITU to Mexico, Argentina, Canada and other countries. In fact, two Applications are pending before the FCC to allow service to the United States from two orbital locations allotted to Canada.[61]

Second, the Commission's competition analysis is not based on a "band-by band" market definition. The inquiry is based on the competition available in the entire market, not only users of a particular spectrum band. As noted in Section II.A, below, the product market is multichannel video programming distribution, not three

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spectrum space by avoiding expensive and unnecessary duplication of facilities and service [and that] the public interest clearly favors this result.")

[59] NAB Petition at 106.

[60] *Id.*

[61] *See* Digital Broadband Applications Corp., File No. SES-LIC-20020109-0023; WSNET Holding, Inc., File No. SES-LIC-200111121-02185.

DBS slots, not even satellites only. The comparison drawn by the NAB from the DARS licensing proceeding is inapposite for a similar reason. The DARS licensees were then, and are now, the only providers of unbundled nationwide subscription radio. DBS providers, by contrast, have to compete against much larger, entrenched incumbents that do not use the "high-power Ku-band spectrum" at all. Finally, the Commission has, in fact, sanctioned the use of the spectrum allocated to a particular service by one licensee.[62]

II. THE MERGER WILL HAVE PRO-COMPETITIVE EFFECTS, AND NO ANTI-COMPETITIVE EFFECTS, IN THE MVPD MARKET

A. EchoStar and DIRECTV Compete Primarily Against Cable Operators in the MVPD Market

EchoStar and DIRECTV compete in the market for Multichannel Video Program Distribution ("MVPD"). This market (and not a DBS-specific one) has been identified by both the Department of Justice[63] and the FCC[64] as the relevant market for

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[62] When the Commission first established the Mobile Satellite Service ("MSS") in the L-band, it received competing Applications from 12 companies, invited all the Applicants to form one consortium, American Mobile Satellite Corporation, and gave one license to that entity. The Commission purposefully elected to license one large consortium as opposed to multiple smaller entities because, among other things: a larger amount of bandwidth would permit a greater variety of services to be provided by an MSS system, and a larger customer base to be served; the high cost of an MSS system and the amount of spectrum available for MSS warranted the licensing of one initial MSS system using the entire allocated spectrum; and joint ownership of an MSS system would best permit a variety of competitive mobile satellite services to be made expeditiously available to the public. These same considerations would justify to a much greater extent here the creation of New EchoStar even if there were not ample other spectrum in the same band available for other competing providers.

[63] In 1998, the Department of Justice ("DOJ") sued to enjoin Primestar, a joint venture of large cable companies, from acquiring rights to an orbital slot for nationwide DBS service that were held jointly by News Corp. and MCI Telecommunications Corp. In the suit, DOJ alleged that allowing cable operators through Primestar to control those DBS assets would eliminate the possibility that those assets could be used to compete

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